

Barnacles

According to Newman & Abbott, barnacles can be defined as crustaceans that as adults are usually sessile, attached to hard substrata or to other organisms and the carapace (mantle) completely envelops the body (n.d.). Barnacles fall within the category of filter feeders. Filter feeders are creatures capable of assimilating suspended or floating organic matter



via a complex filtration organ(s) that allow them to syphon sustenance from the water column (Jeschke et al., 2007). This research found no significant differences in barnacles between the North Sea and Wadden Sea. This research found a total of four species, which are: Wrinkled barnacle (*Balanus crematus*), Beaked barnacle (*Austrominius modestus*), Bay barnacle (*Amphibalanus improvises*), and Common rock barnacle (*Semibalanus balanoides*) (Gittenberger et al., 2015). Half of these species are considered non-native, being the Beaked barnacle and the Bay barnacle (Gittenberger et al., 2015).

History/ Population trends

The barnacles are an ancient group (Newman & Abbott, n.d.). There are published accounts of Silurian fossil remains, and barnacles have been discovered very recently in the Burgess Shale deposits in British Columbia, beds that date from the middle Cambrian period of the Paleozoic (Newman & Abbott, n.d.). Barnacles remain an extraordinarily successful group today, both in number of species (about 1,445 living species are known) and abundance (Newman & Abbott, n.d.). Scientist first thought that barnacles were part of the Phylum *Mollusca* (Newman & Abbott, n.d.). It was later discovered that barnacles fall within the Phylum of *Crustacea* as they are very closely related to lobsters (Newman & Abbott, n.d.).

Miscellaneous

- Barnacles played a big part in the history of punishment at sea. The punishment of keelhauling was the act of tying a condemned offender to a long rope, which would then be used to pull the offender across the keel of the ship (Rostron & Rostron, 2015). The barnacles on the keel would cause lacerations to the offender (Rostron & Rostron, 2015).
- The largest barnacle species in the world is the Giant acorn barnacle (*Balanus nubilus*), measuring up to 12.7cm in height and 7cm across (Largest barnacle, 2010).

Diet

- Zooplankton (Jeschke et al., 2007)
- Phytoplankton (Jeschke et al., 2007)

Source

Gittenberger, A., Dr., Rensing, M., Drs., Dekker, R., Drs., Niemantsverdriet, P., Drs.,

Schrieken, N., BiOrganized, Stegenga, H., Dr., Office for Risk Assessment and

Research, The Netherlands Food and Customer Product Safety Authority of the

Ministry of Economical Affairs, Gittenberger, A., Dr., Philippart, C. J. M., Dr. ir., &

Smolders, A. A. J., Drs. (2015). Native and non-native species of the Dutch Wadden

Sea in 2014. In *GiMaRIS Report 2015_08*. Retrieved November 13, 2024, from

<https://www.nvwa.nl/binaries/nvwa/documenten/dier/dieren-in-de->

[natuur/exoten/risicobecoordelingen/native-and-non-native-species-of-the-dutch-](https://www.nvwa.nl/binaries/nvwa/documenten/dier/dieren-in-de-natuur/exoten/risicobecoordelingen/native-and-non-native-species-of-the-dutch-)

[wadden-sea/Native+and+non-native+species+of+the+Dutch+Wadden+Sea.pdf](https://www.nvwa.nl/binaries/nvwa/documenten/dier/dieren-in-de-wadden-sea/Native+and+non-native+species+of+the+Dutch+Wadden+Sea.pdf)

Jeschke, J. M., Kopp, M., & Tollrian, R. (2007). Consumer-food systems: why type I

functional responses are exclusive to filter feeders. *Biological Reviews/Biological*

Reviews of the Cambridge Philosophical Society, 79(2), 337–349.

<https://doi.org/10.1017/s1464793103006286>

Largest barnacle. (2010, January 15). Guinness World Records. Retrieved November 14,

2024, from [https://www.guinnessworldrecords.com/world-records/92635-largest-](https://www.guinnessworldrecords.com/world-records/92635-largest-barnacle)

[barnacle](https://www.guinnessworldrecords.com/world-records/92635-largest-barnacle)

Newman, W. A., & Abbott, D. P. (n.d.). *Chapter 20: Cirripedia: The Barnacles*. Retrieved

November 14, 2024, from <https://research.nhm.org/pdfs/31753/31753.pdf>

Rostron, R., & Rostron, P. (2015). Biofouling of seawater intake grilles - causes and

mitigation Strategies. *International Journal of Advanced Research*, 3(9), 1399–1407.

[https://www.researchgate.net/profile/Paul-](https://www.researchgate.net/profile/Paul-Rostron/publication/283205127_International_Journal_of_Advanced_Research/links/562dbcf008aef25a24431c6e/International-Journal-of-Advanced-Research.pdf)

[Rostron/publication/283205127 International Journal of Advanced Research/links/](https://www.researchgate.net/profile/Paul-Rostron/publication/283205127_International_Journal_of_Advanced_Research/links/562dbcf008aef25a24431c6e/International-Journal-of-Advanced-Research.pdf)

[562dbcf008aef25a24431c6e/International-Journal-of-Advanced-Research.pdf](https://www.researchgate.net/profile/Paul-Rostron/publication/283205127_International_Journal_of_Advanced_Research/links/562dbcf008aef25a24431c6e/International-Journal-of-Advanced-Research.pdf)